Promotion of Prevention of Perinatal Group B Streptococcal Disease

2002 Revised CDC Guidelines

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Group B Streptococcus (GBS) is a type of bacteria that can be passed from mother to baby during pregnancy or during labor and delivery. Invasive GBS presents in young infants as pneumonia, sepsis and less often as, meningitis, osteomyelitis, and septic arthritis. However, antibiotic treatment during labor of women who test positive for the disease may prevent transmission to the newborn.

Neonatal infections appeared in the 1970s; as many as 50% of the patients died. Advances in neonatal care have decreased the case fatality ratio of early and late onset to 4% in the 1990s. However, GBS remains a leading cause of serious neonatal infection despite great progress in perinatal GBS disease prevention during the 1990s.

1996 Guidelines Replaced

Data collected after the issuance of the 1996 guidelines prompted reevaluation of prevention strategies at a meeting of clinical and public health representatives in November 2001. This report replaces the Centers for Disease Control and Prevention (CDC) 1996 guidelines. Although many of the recommendations in the2002 guidelines are the same as those in 1996, they include some key changes such as:

- All pregnant women should be screened at 35-37 weeks gestation for vaginal and rectal GBS colonization.
- Women with GBS isolated from the urine in any concentration (e.g., 10^3) during their current pregnancy should receive intrapartum chemoprophylaxis because such women usually are heavily colonized with GBS and are at increased risk of delivering an infant with early-onset GBS disease.
- Women who have previously given birth to an infant with invasive GBS disease should receive intrapartum chemoprophylaxis; prenatal culture-based screening is not necessary for these women.
- Colonization during a previous pregnancy is not an indication for intrapartum prophylaxis in subsequent deliveries.
- Screening to detect GBS colonization in each pregnancy will determine the need for prophylaxis in that pregnancy.
- If the result of GBS culture is not known at the onset of labor, intrapartum chemoprophylaxis should be administered to women with any of the following risk factors: gestation <37 weeks, duration of membrane rupture $\geq$18 hours, or a temperature of $\geq$100.4° F ($\geq$38.0°C).
- Women with known negative results from vaginal and rectal GBS screening cultures within 5 weeks of delivery do not require prophylaxis to prevent GBS disease even if any of the intrapartum risk factors develop.
- Women with threatened preterm (<37 weeks' gestation) delivery should be assessed for need for intrapartum prophylaxis to prevent perinatal GBS disease.

- Culture techniques that maximize the likelihood of GBS recovery are required for prenatal screening.
- Collection of specimens for culture may be conducted in the outpatient clinic setting by either the patient, with appropriate instruction, or health-care provider.
- This involves swabbing the lower vagina and rectum (i.e., through the anal sphincter). Because lower vaginal as opposed to cervical cultures are recommended, cultures should not be collected by speculum examination.
- Specimen labels should clearly identify that specimens are for group B streptococcal culture. If susceptibility testing is ordered for penicillin-allergic women, specimen labels should also identify the patient as penicillin allergic.
- If GBS is isolated, the bacteria should be tested for susceptibility to clindamycin and erythromycin.
- At the time of labor or rupture of membranes, intrapartum chemoprophylaxis should be given to all pregnant women identified as GBS carriers.
- Labels on urine specimens from prenatal patients should clearly state the patient's pregnancy status to assist laboratory processing and reporting of results.
- Prenatal culture-based screening at 35--37 weeks' gestation is not necessary for women with GBS bacteriuria.
- Women with symptomatic or asymptomatic GBS urinary tract infection detected during pregnancy should be treated according to current standards of care for urinary tract infection during pregnancy.

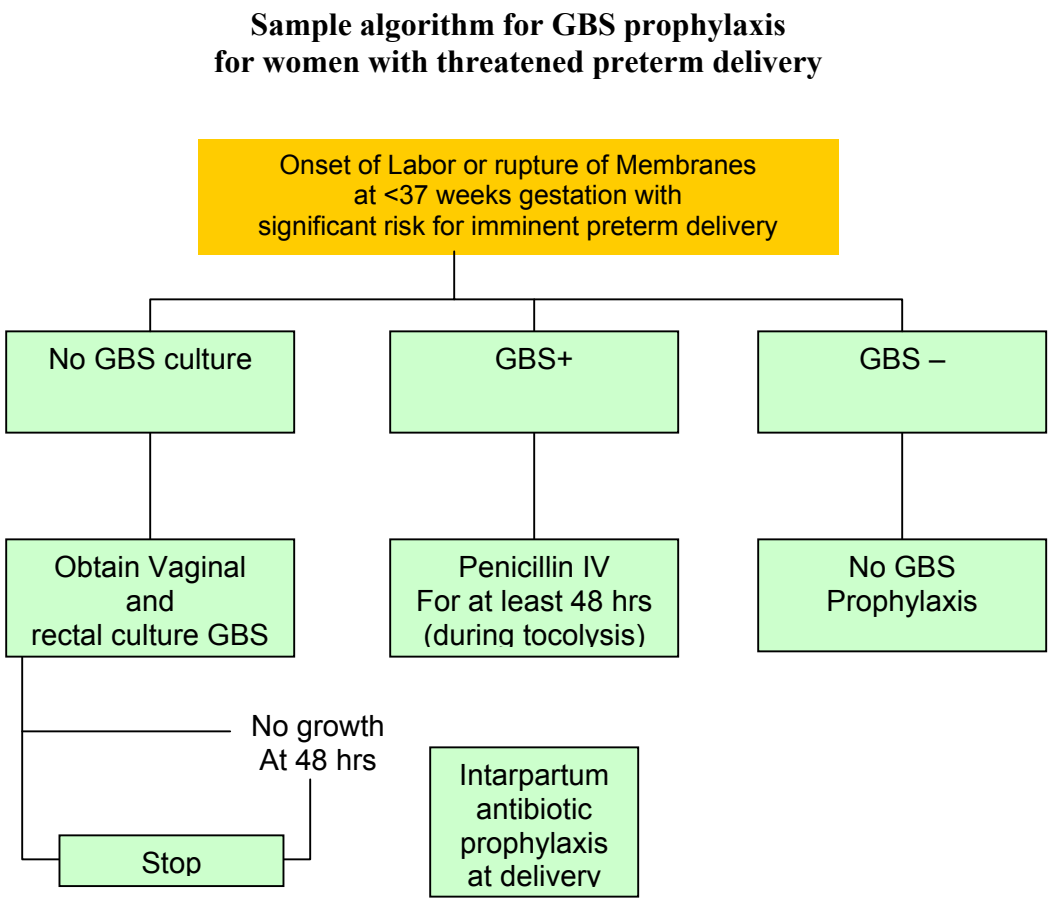
Other changes include:

- Updated prophylaxis regimens for women with penicillin allergy
- Detailed instruction on prenatal specimen collection and expanded methods of GBS culture processing, including instructions on antimicrobial susceptibility testing
- Recommendation against routine intrapartum antibiotic prophylaxis for GBS-colonized women undergoing planned cesarean deliveries that have not begun labor or had rupture of membranes.

Other management approaches, developed by individual physicians or institutions, may be appropriate.

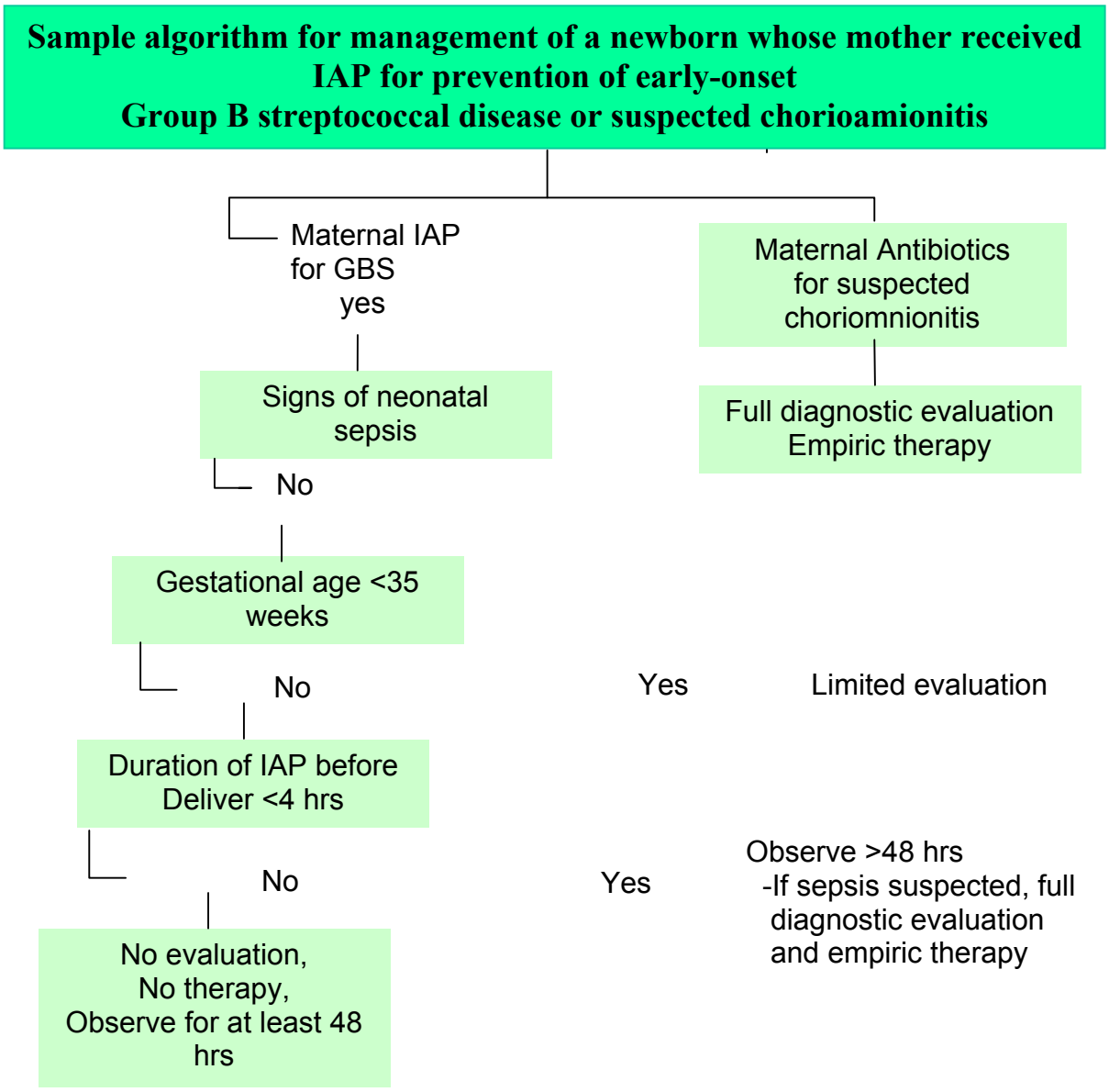
A suggested algorithm for management of patients with threatened preterm delivery as shown in Figure 1.

Figure 1.


Sample algorithm for GBS prophylaxis
for women with threatened preterm delivery
Onset of Labor or rupture of Membranes
at <37 weeks gestation with
significant risk for imminent preterm delivery
No GBS culture
GBS+
GBS –
Obtain Vaginal
and
rectal culture GBS
Penicillin IV
For at least 48 hrs
(during tocolysis)
No GBS
Prophylaxis
No growth
At 48 hrs
Stop
Intarpartum
antibiotic
prophylaxis
at delivery

An updated algorithm for management of newborns exposed to intrapartum antibiotic prophylaxis (IAP) as seen in Figure 2.

Figure 2.



Universal screening for GBS colonization is anticipated to result in further reductions in the burden of GBS disease. However, the need to monitor for potential adverse consequences of intrapartum antibiotic use, such as emergence of bacterial antimicrobial resistance or increased incidence or severity of non-GBS neonatal pathogens. Intrapartum antibiotics are still viewed as an interim strategy until GBS vaccines achieve licensure.

Before the full implementation of this strategy can be expected in all healthcare settings, all members of the healthcare team will need to improve protocols for isolation and reporting of GBS culture results.

Even with the ideal implementation, early onset cases of GBS disease will continue to occur. Tools to help promote prevention and educate parents of infants with early onset GBS disease are available at

http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5111a1.htm
http://www.acog.org
http://www.aap.org/policy/groupb.html
